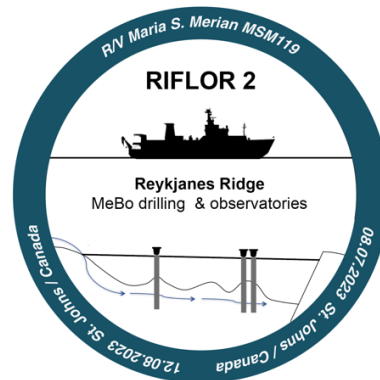


R/V Maria S. Merian

Expedition MSM119 “RIFLOR2”

08.07.2023 – 12.08.2023

St. John’s – St. John’s



Weekly report #6

In the week from 07.08. until the end of the cruise on 12.08. we encountered fair weather conditions, however, we had to factor in another 4 days and nights of transit time back to Newfoundland, Canada. Hence, we cannot report about an awful lot of scientific activity in this sixth and last weekly report from expedition MSM119. At the end of the day, we were able to successfully complete the borehole with MARUM MeBo70, which was started the weekend before, and then deployed a seafloor lander.

As reported before, a fourth borehole with an observatory to monitor the ocean crust was started into the basalt underlying Squid Pond. As the final step, a drill rod prepared with a long-term temperature logging unit (red cap in Fig. 1) was placed successfully before MeBo took off and returned safely to R/V MERIAN.

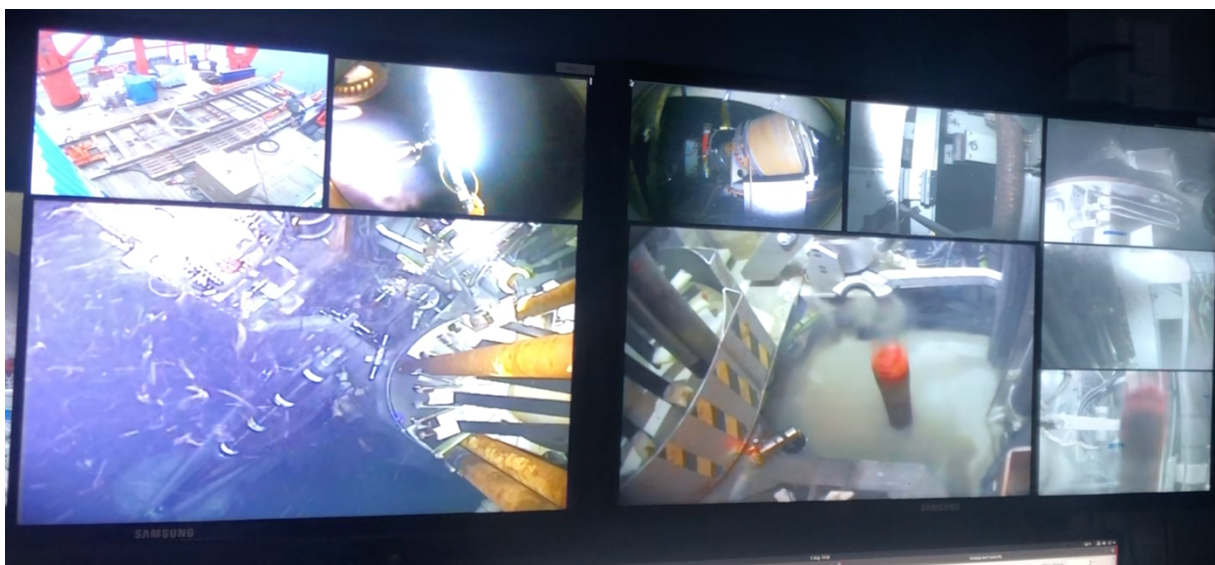


Figure 1 View onto some of the displays in the MeBo Control van before we departed from Squid Pond. The T-CORK can be identified as red end cap on top of the uppermost drill rod.

The final station of cruise MSM was a modular seafloor lander, which was supposed to be deployed adjacent to the MeBo observatory. However, since there was a problem with the releaser during the deployment, we were uncertain about the exact positioning of the lander, so that we decided to retrieve it again after a few complete measurement cycles of each sensor. The recovery went smoothly and we were able to locate the instrument effortlessly in calm seas and safely brought it back to deck (Fig. 2).



Figure 2 Left: MARUM Seafloor Lander during launch with the Releaser above it. Right: Under colourful Northern Lights skies, the lander surfaces and is followed by the beam of R/V MERIAN until it is safely recovered on board.

During the four transit days the crew and scientists were extremely efficient and much of the packing of the 8 containers could be finalised. This attested one more time how well the teams worked together for over a month and how much could be achieved. I would like to express my sincere gratitude to everybody on board!

Back in St. John's, Newfoundland a few trucks plus a huge land crane were awaiting our arrival, all in the misty skies typical for the region.

With best regards on behalf of the entire MSM119 team

Achim Kopf (Chief scientist)